4K NDI Field Video Camera

Crisply-detailed 4K Video, true NDI@|HX3 Camera

MediCAM surgical video camera is a 4K, boom-arm mountable, medical grade video camera designed for operating room. It is designed for capturing high resolution 4K video from surgical procedures.

Sensor does matter. MediCAM uses Sony back-illuminated and stacked Exmor R COMS image sensor that can capture exceptional 4K image and assure high level of details and very low noise. It supports 12x, 18x and 25x lossless optical zoom lens that is capable of zoom-in with high magnification for detailed close-up view of intricate surgical procedures. The camera can output 4K quality video via HDMI and 3G SDI video at the same time, ideal for simultaneous connection to a 4K monitor and recorder.

The camera is also IP based camera and NDI-capable up to NDI® | HX3 that is well-known for its high quality, low latency. The video streaming is an easy way to connect live video in LAN, feed to OBS, vMix, zoom, teams, Skype etc.

The cylindrical all-in-one design is convenient cable routing and safe wipe-clean housing that resist sterilization chemicals.

The Neutral Density-ND filter mount is designed to use any density standard ND lens to assure capturing high-quality video footage under high-brightness shadowless lamp in the operating room.

The camera is optimized for boom mounting sideway or backway in operating room, cables are accessed via a flash rea cover. Connectors and cables are grouped in a dust proof lock connector and allowing the cameras to be rotating freely and safely.

MediCAM can be controlled remotely via IP VISCA , or via serial PELCO, VISCA RS232 or RS485/422 from a PC or dedicated camera controller. Meanwhile, the camera can also controlled by NDI.

The camera can be powered by either DC or PoE, this make it can be power up to one hundred meters away, accessed and controlled by network. Single cable for Video, Audio, Power and Tally in addition to NDI.

The MediCAM can be used for student teaching , academic research or law enforced video of surgical operation.

Highlights:

◇ Sony Ultra-HD 4K back illuminated and stacked 1/2.3" sensor
◇ Crisply-detail, low noise 4K video
◇ Optimized design for boom mounting
◇ Wipe clean design for improved hygiene
◇ High quality 12x, 18x and 25x optical zoom lens
◇ AAE, ASE, AE and manual multiple exposure modes with zone option
◇ Auto, manual, color temp, one push white balance
◇ Optimized exposure, color and sharpness for surgical imaging
◇ Image freeze support
◇ Multiple focus zones, Auto, Manual, One Push focus
◇ Simultaneous 4K HDMI and 3G SDI outputs with embedded audio
◇ Up to 4K30 hardware video encoder
◇ H.264 HP/MP/BP or H.265/HEVC MP codec
◇ NDI® | HX3 support with better quality and very smallest delay
◇ Up to 50mbps bitrate, high bandwidth video stream for best quality
◇ NDI® | HX RTSP, SRT, RTMP(s) steaming up to 4K30
◇ Direct standalone streaming to CDN like YouTube, no PC required
◇ Video scale down, Vertical/Portrait crop and rotation streaming support
◇ Simultaneous live out in different RTMP SRT RTSP and multiple CDN
◇ Low latency SRT streaming
◇ Adaptive AAC audio for both embedded audio and analog
◇ Analog stereo line in audio input
◇ 255 preset support for different operating scenarios
◇ RS232/485/422 PELCO/VISCA, IP VISCA PTZ control
◇ Simple setup and configuration via login protected web interface
◇ Handy 8 button membrane panel for menu, zooming, WB and setup
◇ Simple setup and configuration via login protected web interface
◇ Comprehensive control via by PC, smartphone, iPad, Controller and Panel
◇ Live video feed to PC, phone and iPad
◇ Flexible WYSIWYG OSD, text, logo and stamp image overlay, user-friendly
◇ Easy access and plug-and-play installation by mDNS
◇ Standard ND UV Polarized lens thread
◇ RESTFUL API supported for DIY automation and system integrator
◇ OEM/ODM support

Specification

Power :
Input : 12-20VDC 1A max
Medical grade power supply
POE (IEEE802.3af)
Consumption : ~8W Typical

Camera :
Image Device : Sony 1/2.3"
Back-illuminated and stacked Exmor R
Effective Pixels : 3840(H) x 2160(V)
Aperture/IRIS : F1.6-2.8, F1.67-3.67, F1.6-4.3
Electronic Shutter : AUTO, 1/25(30), 1/50(60), 1/90, 1/100, 1/120, 1/125,
1/180, 1/250, 1/300, 1/500, 1/600, 1/725, 1/1000,
1/2000, 1/3000, 1/4000, 1/6000, 1/10000
Lens Zoom Ratio : 12x, 18x, 25x
Focal Length : f3.4-40.3mm, f5.5-99mm, f5.3-130mm
FOV(D/H/V) : 12x, Wide:78.5°/70.8°/42.7°, Tele:7.4°/6.4°/3.6°
18x, Wide:63.1°/51.9°/39.7°, Tele:3.7°/3.0°/2.2°
25x, Wide:67.9°/55.0°/41.6°, Tele:2.8°/2.3°/1.7°
Gamma Control : 9 options
Noise Reduction : 2D/3D, 8 levels
White Balance : Auto, One Push, R/B Gain, Color Temp, Lock
Color Temp. : 3000-6500K
Focus : Auto/Manual/One Push with AF Lock
Focus Zone : 6 zones and Point Focus
Exposure : AE/AAE/SAE/M with AE lock
Mirror/Flip : Automatic/Manual
Style : Default, Color/Sharpness Enhancement etc.
ND/UV/PL Mount : 58mm
Min. field Light Dia. : 〉14cm at 1 meter distance

Video :
Video Encoder : H.264 HP/MP/BP, H.265 MP
Resolution : 4K2160p25/30, 1080p25/30/50/60
1080i50/60, 720p50/60
Bit Rate : Max. 50Mbits/s, adjustable
Frame Rate : 24/25/30fps for all, 50/60fps for 1080/720p
Codec : H.264/265
Rate Control : CBR/VBR
Live Preview : Web, HDMI and SDI
OSD : WYSIWYG editor

Network :
LAN : 100/1000Mbps Gigabit
Bluetooth : Optional
WEB : http, https

Streaming :
Streaming Out : RTMP/SRT*/RTP/UDP/RTSP, *SRT caller only
Bit Rate : Max. 50mbits/s, adjustable
NDI® : NDI® | HX3/HX2/HX
Main Video Stream : Up to 4K30
Secondary Stream : Up to 720p
Recorder : mp4, mov, ts
Storage : NAS
Rotation : 0/90/180/270°, native vertical streaming

Video Out:
HDMI Out : 1.4b, 4:2:2(YCbCr)
SDI Out : 3G SDI, 800mVpp, 75ohm, 4:2:2(YCbCr)
NDI : NDI® | HX3/HX2/HX (NDI v5.5, upgradeable)

Audio :
Sampling : 32, 44.1, 48KHz
Encoder : AAC, MP3, 16bit
Bitrate : 32-192kbps
Line Input : 0.7VRMS，20K, 2CH, AGC
Microphone : Dual MIC omni-direction, 2.0V bias
Source : Line In, MIC
Audio Embedding : HDMI, SDI and NDI

Zoom and Control :
Protocol : IP VISCA, VISCA, NDI®, Pelco P/D,
Onvif
Setting : Mobile Phone, Pad, PC, RESTFUL API
OSD Menu : Support

Panel:
Button : 8 Membrane buttons
Menu Display : Built-in
WB : One push AWB
Freeze : One push freeze

Software :
Firmware : Upgradeable, Linux OS

Interface :
Power : 1 x DC Jack 5.5*2.1
HDMI Output : 1 x TYPE A, Receptacle
SDI Output : 1 x BNC, Female
RS485/422 : 3 x Terminal Block
RS232 : DB9 female
Audio In : 1 x 3.5mm Jack
Network : RJ45, Gigabit, PoE
Visible : 1 x LED, bi-color

Physical and Environment
Size : 237.8 x 102 x 98mm(9.36" x 4.0" x 3.8")
Weight : 1.495kg (3lb 4.73oz)
Operating : 0°C to 45°C(32°F to 113°F), <80% Humidity
Storage : -20°C to 60°C(-4°F to 140°F)
Mount : Boom ARM side or bottom (3x1/4"-20UNC)

Certification
CE, FCC, IEC60601-1-2

Ordering
30631-XYZ
Z=1-12x, 2-18x, 3-25x
Y=0-Surgical Camera, 1-NDI
X=5-Bottom mount, 6-Side mount, 7-Middle mount（Module)

Accessories
Power Adapter x 1
Quick User Guide

* All specifications are subject to change without notice.
* Accessory supply may be different for different product options.
* Actual object may differ from what you see from the catalog.